

CLAIMS

1. A wearable device for detecting, processing, analyzing and reporting predetermined physical states of a human body, the device comprising:

a plurality of electrodes, including at least one pair of sense electrodes 14 and a reference electrode 16, each of said electrodes configured to be adhesively attached to a surface of the body 30; and

an electronics module 12, said module (1) in electrical communication with each of said plurality of electrodes, said module (2) including a power source, and said module (3) processing and analyzing signals provided by said plurality of electrodes,

wherein said plurality of electrodes and said electronics module are covered by a single adhesive membrane 20 to enable said wearable device to adhere to the surface of the body.

2. The device of Claim 1, wherein said electronics module 12 includes a wireless transmitter and, upon detection by said electronics module of a predetermined condition, the wireless transmitter transmits an alarm status.

3. The device of Claim 1, wherein said electronics module includes a battery.

4. The device of Claim 1, wherein said reference electrode is a dry electrode.

5. The device of Claim 4, wherein said reference electrode 16 is integrally formed with said electronics module 12.

6. The device of Claim 1, wherein said electronics module 12 has a top surface and a bottom surface, and wherein a plurality of conductive pads are formed on the top and bottom surfaces.

7. The device of Claim 1, wherein said electronics module 12 has a top surface and a bottom surface, and wherein a plurality of conductive pads are formed on the bottom surface.

8. The device of Claim 7, wherein at least one of the plurality of the conductive pads is silver plated on said electronics module 12.

9. The device of Claim 1, wherein the pair of sense electrodes 14 and the reference electrode 16 are integral to a breathable cloth matrix.

10. The device of Claim 8, wherein the breathable cloth matrix includes electrode gel on a top surface and a bottom surface of said cloth matrix.

11. The device of Claim 1, wherein the reference electrode 16 is positioned on the breathable cloth matrix between the pair of sense electrodes 14.

12. The device of Claim 11, wherein the sense electrodes 14 are at least two inches apart.

13. The device of Claim 1 further comprising means for providing a local alarm to a person wearing said device indicating that an alarm status is indicated.

14. The device of Claim 13, further comprising a deactivation mechanism, wherein said deactivation mechanism may be operated so as to prevent said device from wirelessly transmitting a further indication of the alarm status.

15. An apparatus for detecting, processing, analyzing and reporting physiological conditions, comprising:

a plurality of electrodes 14,16 configured to be adhesively attached to a surface of a human body 30 for detecting physiological data; and

processing means 12 in electrical communication with each of said plurality of electrodes, said processing means analyzing and processing signals provided by said plurality of electrodes into physiological output data,

wherein said plurality of electrodes and said processing means are mounted within the confines of a single flexible adhesive material 20 adapted to be adhered to the human body 30, such that said electrodes and said processing means avoid interfering with the motion and flexibility of said human body.

16. The apparatus of Claim 15, wherein said processing means includes a battery.

17. The apparatus of Claim 15, further comprising output means in electrical communication with said processing means for communicating the output data to a user.